



# STAFF REPORT

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**Meeting Type:** Watershed Committee/ Board of Directors  
**Title:** Abundance Patterns of Landbirds on the District Lands  
**From:** Shaun Horne, Director of Watershed Resources  
**Through:** Ben Horenstein, General Manager  
**Meeting Date:** September 19, 2024

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**TYPE OF ACTION:**                      Action                      X                      Information                      Review and Refer

**RECOMMENDATION:** Receive report

**SUMMARY:** Point Blue Conservation Science has monitored the abundance of landbirds in the Marin Municipal Water District (Marin Water) watershed lands from 1996 to 2022. Using this monitoring data, Point Blue analyzes trends in abundance of 56 species of birds during the breeding season. Staff will provide a presentation of the 2022 Report on the Abundance Patterns of Landbirds (Report).

**DISCUSSION:** The Marin Municipal Water District (Marin Water) encompasses over 21,000 acres of land in Marin County, including 18,900 on Mt. Tamalpais, and 2,700 adjacent to Nicasio and Soulajule Reservoirs. These lands include a diversity of habitat types and wildlife. In 1996, Point Blue Conservation Science (Point Blue; formerly PRBO) and Marin Water implemented a three-year project to assess the status and distribution of landbird populations on watershed lands managed by Marin Water (Holmes et al. 1998). This initial project was followed by the establishment of a long-term monitoring program, where it was determined that all 337 point count stations would be surveyed every third year beginning in 2001 (with a subset of points surveyed in 1999 for a different purpose and not included in long-term trend analysis). An additional 25 points were added in 2019 in grassland habitat (DiGaudio and Humple 2019), with six of those points selected for continued monitoring in 2022 and beyond, after evaluating their potential contribution to our understanding of grassland birds in the region. The principal goal of this long-term study is to monitor the abundance of landbird populations on Marin Water lands over time in order to provide land managers with information on the overall status of this natural resource, which will in turn provide guidance on when management actions are warranted and additional research is needed.

In this Report, Point Blue analyzed trends in abundance for 56 species of birds present during the breeding season (55 native species, and the introduced European Starling). The Report scored species population trends using an established protocol by Partners in Flight, and then translated those scores to categories of concern: Least Concern, Uncertain/Caution, Caution, and Significant Concern. Twenty-eight or 51% of the 55 native species exhibited increasing trends or were considered stable (Least

Concern); six or 11% of the native species had either uncertain trends or small decreases (Uncertain/Caution); four or 7% of the native species showed moderate to possible large decreases (Caution); and 17 or 31% of native species exhibited large decreases (Significant Concern). The non-native European Starling also exhibited a large decrease. The Report evaluated trends for species grouped by their primary habitat association on Marin Water lands. The Report found that species primarily associated with forested habitat types (conifer and mixed hardwood, oak woodland, and species that used multiple forest types) had the highest proportion of species that were increasing or stable. The habitat guilds with the highest proportion of declining species were the generalists (species that used three or more habitat types on Marin Water lands) and riparian/wetland-associated species. The shrub/chaparral guild was only represented by four species and their trend results were mixed. Point Blue established additional grassland points in 2019 to increase our ability to assess birds in this habitat type, but due to limited data they are not yet able to evaluate trends in grassland birds.

The populations of many of the landbird species found on Marin Water lands during the breeding season have remained stable or are increasing since 1996, confirming that Marin Water lands continue to provide valuable habitat for many birds. However, the populations of over a third of the species we analyzed have declined over the course of the 26-year study. Local bird populations are affected by changes in habitat and environmental conditions beyond the boundaries of Marin Water lands. In particular, climate change is predicted to, either independently or together with other threats, exacerbate widespread declines in landbird populations (Tingley et al. 2009, Jongsomjit et al. 2013, Seavy et al. 2018). Given this expectation, effective land stewardship is important for protecting, enhancing, and managing high quality habitat, and the ability to detect changes in natural resources will continue to be essential to adaptive management. The long-term landbird dataset from Marin Water monitoring has played an important role in our understanding of local landbird populations, including in the One Tam region (Gardali et al. 2016; Humple et al. *in press*), where it is central to the understanding of how birds in the region are doing and is combined with data from other regional jurisdictions to inform the One Tam Peak Health Report. This dataset has also been used for the Marin County Compass project (2021), a new performance management program in the County of Marin where the landbird data was one of the metrics of ecological health for the County. The extensive amount of diverse and protected habitat types on Marin Water lands contribute to the health of regional landbird populations beyond their boundaries, and for migratory species, can contribute to populations spanning the Pacific Flyway.

Work on the next tri-annual monitoring report will be carried out in 2025.

**ENVIRONMENTAL REVIEW:** Not applicable.

**FISCAL IMPACT:** Not applicable.

**ATTACHMENT(S):**

1. Abundance Patterns of Landbirds in the Marin Municipal Water District: 1996-2022